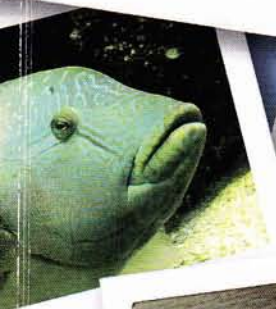
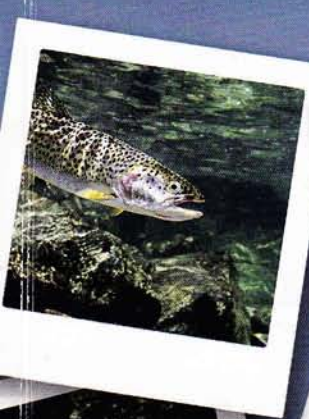


XIV European Congress of Ichthyology
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Program and Abstracts



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XIV European Congress of Ichthyology Liège, 3-8 July 2012 (Belgium)

Ethology

Oral

Reproductive performance in F1 hybrids of two phytophilous cyprinid fish, the silver bream (*Blicca bjoerkna*) × the rudd (*Scardinius erythrophthalmus*)

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Reproductive performance including the spawning behaviour and quality of gametes in cultured F1 hybrids of two phytophilous cyprinid fish species, the silver bream *Blicca bjoerkna* × rudd *Scardinius erythrophthalmus* was investigated in this study at their first sexual maturity. The spawning behaviour was studied in terms of egg release, courting and mating acts under reproductive conditions between hybrids or mixed with the silver bream males. Behavioural experiments were conducted in experimental environments simulating natural reproductive conditions of the species using the spawning ground, high temperature, mixing of sex, natural photoperiod and no hormonal injections. The quality of gametes was evaluated by analysing egg production, sperm density, and F2 and backcross offsprings. For the egg production, the gonadosomatic index, absolute fecundity and egg diameters were analysed at spawning. Sperm density was estimated by counting spermatozoa in a hemocytometer. F2 and backcross offsprings were produced from eggs of the female hybrid fertilised with the sperm of a corresponding hybrid male and a male silver bream. The results revealed that these hybrids exhibited all the reproductive behaviours of the parental species with an intense courting activity. Each egg-release act was accompanied by mating activity, involving simultaneously and successively all the experimental males, hybrids and silver bream, resulting in fertilised eggs. The quality of female sexual products was close to that found in parental species. However, the male sexual products were found more diluted, and F2 generations produced with a significantly lower hatching rate than backcrosses. This study has proven that these F1 hybrids have the capacity to exhibit all the reproductive behaviour as observed in the wild population of parental species. These hybrids are fertile and thus biologically viable. In rivers, their backcrossed offsprings have a greater chance of occurring than F2 progeny.

Keywords : Behaviour, Gametes, Hybrids